

REMARKS

Request for Withdrawal of Finality

Applicants respectfully request withdrawal of the finality of the presently outstanding Office Action. In an attachment received with the present Office Action, the Examiner made a Requirement for Information under 37 C.F.R. § 1.105. As set forth at MPEP § 704.11(b): “[o]rdinarily, a request for information should not be made with or after a final rejection.” As further noted in the MPEP, making the request with a non-final action affords the Examiner an opportunity to consider and act on the response to the request:

A requirement for information is not proper when no further action would be taken by the examiner. The reasonable necessity criteria for a requirement for information implies further action by the examiner. This means that actions in which requirements for information necessary for examination are made should generally be a non-final action because the applicant's reply must be considered and applied as appropriate.

MPEP § 704.11(b)(III). Therefore, Applicants respectfully request that the finality of the present Office Action be withdrawn so that the Examiner has an opportunity to consider and take action in response to Applicants' information and remarks below. The remainder of this response assumes that the finality of the present office action will be withdrawn.

Summary of Claim Status

Claims 1-12 are pending in the present application after entry of the present amendment. Applicants have canceled Claims 4 and 5, thereby rendering the rejection of these claims moot. Claims 1–12 are rejected for the reasons discussed below. Applicants respectfully request favorable reconsideration of the claims and withdrawal of the pending rejections in view of the present amendment and in light of the following discussion.

Response to Requirement for Information

The Examiner has required the Applicants and Assignee under 37 C.F.R. § 1.105 to provide an explanation of Thomas A. Kean's history with Xilinx, the Assignee. In response to this requirement, Applicants and Assignee provide the following information. Thomas A. Kean is a former Xilinx employee. Mr. Kean's employment with Xilinx ended in 1998, and he is not currently employed by Xilinx, as of the date of this response. Assignee does not believe common ownership exists between the present application and U.S. Patent Application 09/747,759 (Pub. No. US 2001/0015919) by Thomas A. Kean. Applicants believe the above information is a complete response to the Examiner's requirement for information.

Declarations under 37 C.F.R. § 1.131

Applicants submitted declarations under 37 C.F.R. § 1.131 with the response filed on August 23, 2004. The Examiner stated that the declarations have been considered but are ineffective to overcome the Kean reference. Applicants respectfully disagree with the Examiner. In particular, Applicants believe the declarations by the inventors of the present invention, and the documentary evidence submitted with the declarations is sufficient to establish conception of the invention prior to the effective date of the Kean reference. Furthermore, Applicants believe the facts cited in the declarations are sufficient to establish due diligence.

However, the Examiner's arguments are now moot in light of the amendments and remarks made herein, which Applicants believe overcome the Examiner's rejections based on the Kean reference.

Specification

The disclosure is objected to because of informalities. The Examiner stated that the citation on page 35, line 28 is incomplete. Applicants respectfully disagree and submit that the reference is complete. In particular, the reference is to "Schneier, *ibid*, at pages 200-203." On page 4, lines 17-19 of the specification, Applicants make reference to and provide full citation information for "Bruce

Schneier in 'Applied Cryptography Second Edition: protocols, algorithms, and source code in C' copyright 1996 by Bruce Schneier, published by John Wiley & Sons, Inc." Thus, the reference on page 35, line 28 refers back to this reference, and is complete. Therefore, Applicants believe no correction is necessary since the reference is complete.

Rejections Under 35 U.S.C. § 102

Claims 1-9 and 11-12 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kean, U.S. Patent Publication No. US 2001/0015919 ("Kean"). Applicants thank the Examiner for an explicit and clear description of how Kean is being read. However, Applicants respectfully traverse this rejection.

Applicants have canceled Claim 4 and amended Claim 1 to recite: "wherein the key is stored in volatile memory that may be powered by a battery," and Applicants respectfully submit that Kean does not teach or even suggest such a feature. With respect to canceled claim 4, the Examiner stated that "Kean discloses the method wherein the key in the FPGA is stored in volatile memory that may be powered by a battery (page 1, paragraph 0005, 0007)." However, paragraphs 0005 and 0007 do not teach that a key used for encryption is stored in volatile memory that may be powered by a battery. Paragraph 0005 of Kean merely states that SRAM programmed FPGAs lose all information when powered off, and thus require a configuration bitstream immediately after power is applied from a serial EPROM. There is no mention of any key or a battery.

Likewise, paragraph 0007 merely describes the use of a battery back up system to keep "the FPGA powered on in order to preserve its configuration memory contents even when the system containing the FPGA is powered off." Kean teaches that such a battery back up may be used as a security feature by loading the configuration bitstream before it is shipped to an end user, thereby "preventing unauthorized access to the bitstream information." The battery back up described in Kean secures the configuration data, and thus eliminates the need for any encryption key, since the primary goal of encryption is to secure the bitstream while it is being transferred to the FPGA. Thus, Kean in fact teaches

away from a key stored in volatile memory that may be powered by a battery, as the battery system described at paragraph 0007 is used in a system for securing a bitstream without using an encryption key. An encryption key in such a system would serve no useful purpose since there is no data to encrypt.

In contrast, Claim 1 recites a key is stored in volatile memory that may be powered by a battery. Kean does not teach or disclose at least such a feature. Therefore, Applicants believe Claim 1 is allowable, and allowance of Claim 1 is respectfully requested.

Claims 2, 3, 6, 8, and 9 depend from Claim 1, and thus include all of the limitations of Claim 1. Applicants believe Claim 1 is allowable based on the amendment and remarks detailed above. Therefore, for at least the same reasons, Applicants believe Claims 2, 3, 6, 8, and 9 are also allowable, and respectfully request allowance of Claims 2, 3, 6, 8, and 9.

Applicants have made amendments in Claims 7, 11, and 12, respectively, that are similar to the amendment made in Claim 1. In particular, amended Claim 7 recites the encrypting comprises encrypting using at least one key stored in volatile memory that may be powered by a battery; amended Claim 11 recites the key is stored in volatile memory that may be powered by a battery; and amended Claim 12 recites the means for encrypting comprises means for encrypting using at least one key stored in volatile memory that may be powered by a battery. As set forth above, Applicants submit Kean does not teach at least this feature. That is, Kean does not teach or disclose a key stored in volatile memory that may be powered by a battery. Therefore, for at least the same reasons, Applicants believe Claims 7, 11, and 12 are also allowable, and respectfully request allowance of Claims 7, 11, and 12.

All of the above amendments are fully supported by the specification as filed.

Rejections Under 35 U.S.C. § 103

Claim 10 rejected under 35 U.S.C. § 103(a) as being unpatentable over Kean in view of Kittirutsunetorn, U.S. Patent No. 5,081,675 ("Kittirutsunetorn").

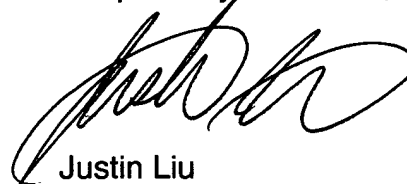
Claim 10 depends from independent Claim 1, and thus includes all of the limitations of Claim 1. For the reasons set forth above, Applicants believe Claim 1 is allowable. Kittirutsunetorn does not overcome the deficiencies of Kean. Therefore, for at least the same reasons, Applicants believe Claim 10 is allowable, and allowance of Claim 10 is respectfully requested.

Conclusion

Applicants acknowledge an unusually thorough and helpful analysis of all pending claims by the Examiner.

No new matter has been introduced by any of the above amendments. Applicants request that the Examiner reconsider the final rejection and consider the above arguments. These arguments are believed to clearly indicate that the application including Claims 1-3 and 6-12 are allowable. Therefore, Applicants request allowance of the application. If any action other than allowance is contemplated by the Examiner, the Examiner is invited to telephone Applicants' attorney at 408-879-4641.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450, on April 15, 2005.

Julie Matthews
Name


Signature